

Appl. No. : 00/070,635
Filed : March 1, 2002

REMARKS

Claims 2, 3, 8 and 9 have been canceled without prejudice. Claims 5, 6, 10 and 11 have been canceled as being directed to a non-elected invention. Claim 7 was canceled at the International stage (Article 34). Claims 1 and 4 have been amended to clarify the invention. Support for the amendment can be found in Figs. 1-5, for example. Claims 12-14 have been added. Support for Claim 12 can be found in Fig. 1, for example. Support for Claims 13 and 14 can be found in Fig. 6, for example. The amendments do not raise the addition of new matter to the application. Applicant respectfully requests entry of the amendments and reconsideration of the application in view of the amendments and the following remarks.

Affirmation of Election of Species Requirement

The Examiner asserts that a provisional election was made with traverse to prosecute the invention of species A, claims 1-4, 8 and 9 on September 25, 2003. However, no traverse was made. Applicant affirms this election, and Claims 5, 6, 10 and 11 have been canceled as being directed to a non-elected invention.

Rejection of Claims 10 and 11 Under 35 U.S.C. § 112

Claims 10 and 11 have been rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement. Claims 10 and 11 have been canceled. Thus, this rejection is moot.

Rejection of Claim 1 Under 35 U.S.C. § 102

Claim 1 has been rejected under 35 U.S.C. § 102(b) as being anticipated by Beecher et al. However, Beecher et al. does not teach a rotating carriage. Thus, Claim 1 as amended herein could not be anticipated by Beecher et al.

Rejection of Claims 2-4 and 8 Under 35 U.S.C. § 103

Claims 2-4 and 8 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Beecher et al. in view of either Shaher et al. or the Italian patent No. 619,225. As mentioned above, Claims 2 and 8 have been canceled. Claim 4 has been amended for clarification. Claim 4 is dependent on Claim 1, and patentability of Claim 1 will be discussed below.

In Claim 1, (i) a carriage rotates along a ring-shaped fixed horizontal rail, and the carriage comprises an outer ring, an inner ring, and wheels connected between the outer ring and the inner ring and running on the rail, (ii) vertical columns are connected rigidly to the inner ring of the carriage, and extend above and/or below the carriage, (iii) a table has a stroke capable of moving above and/or below the carriage, and lifts up and down along the vertical columns, and the table is surrounded by the vertical columns, (iv) a drivingly running mechanism is incorporated into the carriage so that the carriage can be run; and (v) a drivingly lifting mechanism is incorporated into the vertical columns or the table so that the table can be lifted up and down. See Figs. 1-5, for example.

In the above, all of the carriage, the vertical columns, and the table rotate together along the ring-shaped rail, and only the table moves vertically along the vertical columns. Because of the above structures, without great twisting moment or bending moment, an object can be transferred from one place to another in a vertical direction and in various horizontal directions. Further, because the drive mechanisms (vertical movement and rotation) are incorporated in the carriage, the vertical columns, or the table, an upper end and a lower end of the transfer device can be free of any structure, and a central portion can be hollow except for the table. One advantage of the above structures is that two transfer devices can be used, between of which a common in-and-out floor is provided (see Fig. 6, for example). Features (i)-(v) above enable this remarkable configuration, thereby carrying in and out an object easily and carrying in and out many objects quickly.

Both Shaher et al. and the Italian patent No. 619,225 simply teach a turntable type carrier. Neither teaches nor even suggests features (i)-(v) above. Beecher is irrelevant to the above structures. Thus, Claim 1 could not be obvious over the prior art. Claim 4 further limits the structures and could not be obvious over the prior art. Applicant respectfully requests withdrawal of this rejection.

Rejection of Claim 9 Under 35 U.S.C. § 103

Claim 9 has been rejected under 35 U.S.C. § 103(a) as being unpatentable over Beecher et al. in view of either Shaher et al. or the Italian patent No. 619,225, and further in view of either Manaugh or Jung. As mentioned above, Claim 9 has been canceled. Thus, this rejection is moot.

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New Claims 13-14

Claims 13 and 14 recite the transfer device of Claim 1, wherein two transfer devices are used, between which a common in-and-out floor is provided, and wherein no vertical column crosses the floor. As shown in Fig. 6, an object (a car) is carried under the table of the upper transfer device so that the object can be conveyed to the in-and-out floor, whereas an object (a car) is carried above the table of the lower transfer device so that the object can be conveyed to the in-and-out floor. This structure is very effective in transferring an object easily and quickly. That is, the in-and-out floor can access both of the upper and lower transfer devices, and the vertical column does not cross the floor and does not interfere with operation on the floor. This structure is very unique, and none of the prior art teaches or suggests it.

CONCLUSION

In light of the Applicant's amendments to the claims and the foregoing Remarks, it is respectfully submitted that the present application is in condition for allowance. Should the Examiner have any remaining concerns which might prevent the prompt allowance of the application, the Examiner is respectfully invited to contact the undersigned at the telephone number appearing below.

Please charge any additional fees, including any fees for additional extension of time, or credit overpayment to Deposit Account No. 11-1410. A duplicate copy of this sheet is enclosed.

Respectfully submitted,

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